



6AX5-GT

FULL-WAVE VACUUM RECTIFIER

6AX5-GT

GENERAL DATA

Electrical:

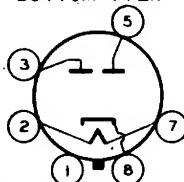
Heater, for Unipotential Cathode:

Voltage. 6.3 ac volts
Current. 1.2 amp

Mechanical:

Mounting Position. Any
Maximum Overall Length. 3-5/16"
Maximum Seated Length. 2-3/4"
Maximum Diameter. 1-9/32"
Bulb T-9
Base Short-Intermediate-Shell Octal 6-Pin
Basing Designation for BOTTOM VIEW G-6S

Pin 1-No Connection
Pin 2-Heater
Pin 3-Plate of Diode No.2
Pin 5-Plate of Diode No.1
Pin 7-Heater
Pin 8-Cathode



FULL-WAVE RECTIFIER

Maximum Ratings, Design-Center Values:

PEAK INVERSE PLATE VOLTAGE 1250 max. volts
PEAK PLATE CURRENT PER PLATE 375 max. ma
HOT-SWITCHING TRANSIENT PLATE CURRENT
For duration of 0.2 second maximum 2.6 max. amp
AC PLATE SUPPLY VOLTAGE (RMS) PER PLATE. See Rating Chart
DC OUTPUT CURRENT PER PLATE. See Rating Chart
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode. 450 max. volts
Heater positive with respect to cathode. 450 max. volts

Typical Operation with Capacitor-Input Filter:

AC Plate-to-Plate Supply
Voltage (RMS) 700 900 volts
Filter-Input Capacitor[▲] 10 10 μ f
Effective Plate-Supply Impedance
Per Plate 50 105 ohms
DC Output Voltage at Input to
Filter (Approx.):
At half-load cur. of { 62.5 ma. 395 - volts
40 ma. - 540 volts
At full-load cur. of { 125 ma. 350 - volts
80 ma. - 490 volts
Voltage Regulation (Approx.):
Half-load to full-load current 45 50 volts

[▲] Higher values of capacitance than indicated may be used but the effective plate supply impedance may have to be increased to prevent exceeding the maximum rating for hot-switching transient plate current.

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TENTATIVE DATA 1

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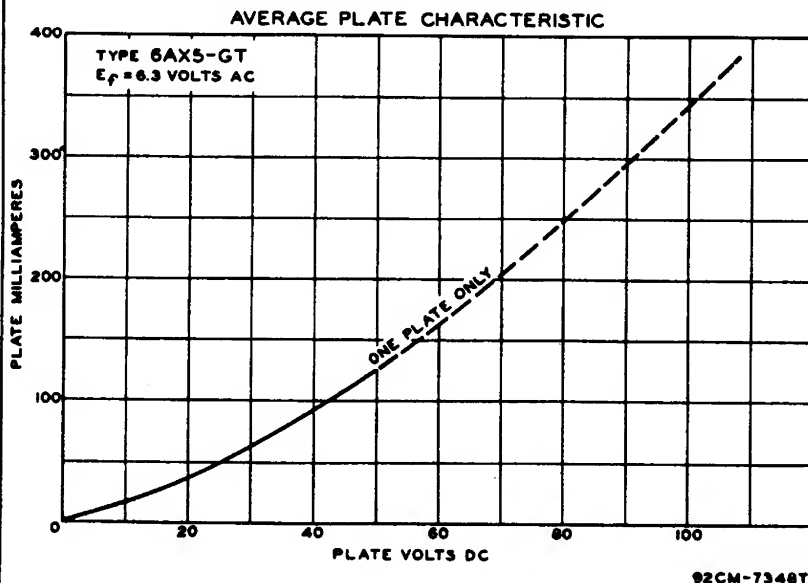


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FULL-WAVE VACUUM RECTIFIER

Typical Operation with Choke-Input Filter:

AC Plate-to-Plate Supply			
Voltage (RMS)	700	900	volts
Filter-Input Choke	10	10	henries
DC Output Voltage at Input to			
Filter (Approx.):			
At half-load cur. of	75 ma.	270	volts
	62.5 ma.	-	365
	150 ma.	250	volts
At full-load cur. of	125 ma.	-	350
			volts
Voltage Regulation (Approx.):			
Half-load to full-load Current . .	20	15	volts



RATING CHART and OPERATION CHARACTERISTICS

The *Rating Chart* presents graphically the relationships between maximum ac voltage input and maximum dc output current derived from the fundamental ratings for conditions of capacitor-input and choke-input filters. This graphical presentation gives the equipment designer considerable latitude in choice of operating conditions.

The *Operation Characteristics for Full-Wave Circuit with Capacitor-Input Filter* show not only the typical operating curves for such a circuit, but also show by means of boundary lines "ADK" the limiting current and voltage relationships presented on the Rating Chart.

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TENTATIVE DATA 1



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FULL-WAVE VACUUM RECTIFIER

The *Operation Characteristics for Full-Wave Circuit with Choke-Input Filter* show the typical operating curves for such a circuit. They not only show by means of boundary line "CEK" the limiting current and voltage relationships presented on the *Rating Chart*, but also give information as to the effect on regulation of various sizes of chokes. The solid-line curves show the dc voltage outputs which would be obtained if the filter chokes had infinite inductance. The long-dash lines radiating from the zero position are boundary lines for various sizes of chokes as indicated. The intersection of one of these lines with a solid-line curve indicates the point on the curve at which the choke no longer behaves as though it has infinite inductance. To the left of the choke boundary line, the regulation curves depart from the solid-line curves as shown by the representative short-dash regulation curves.

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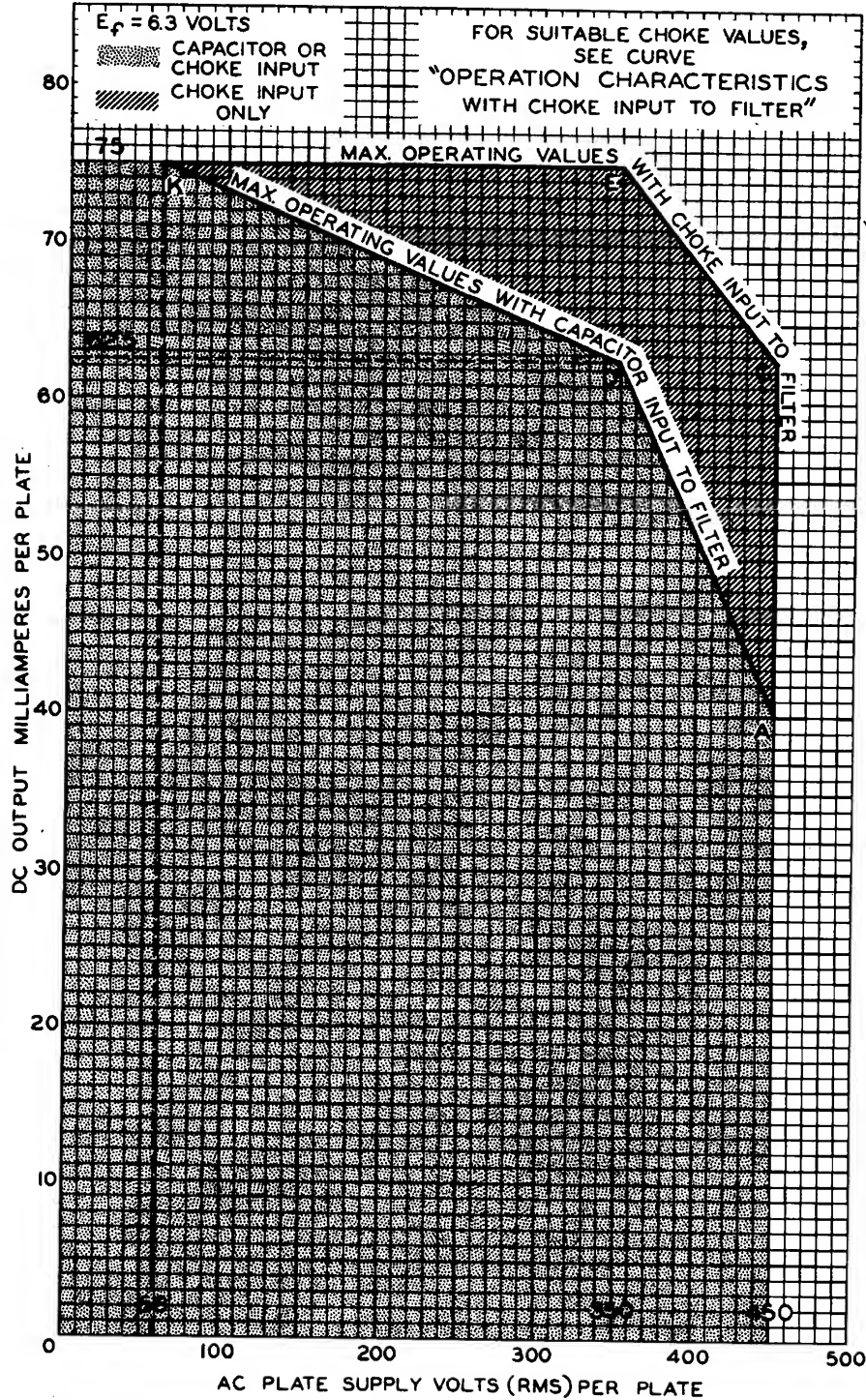
TENTATIVE DATA 2

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RATING CHART



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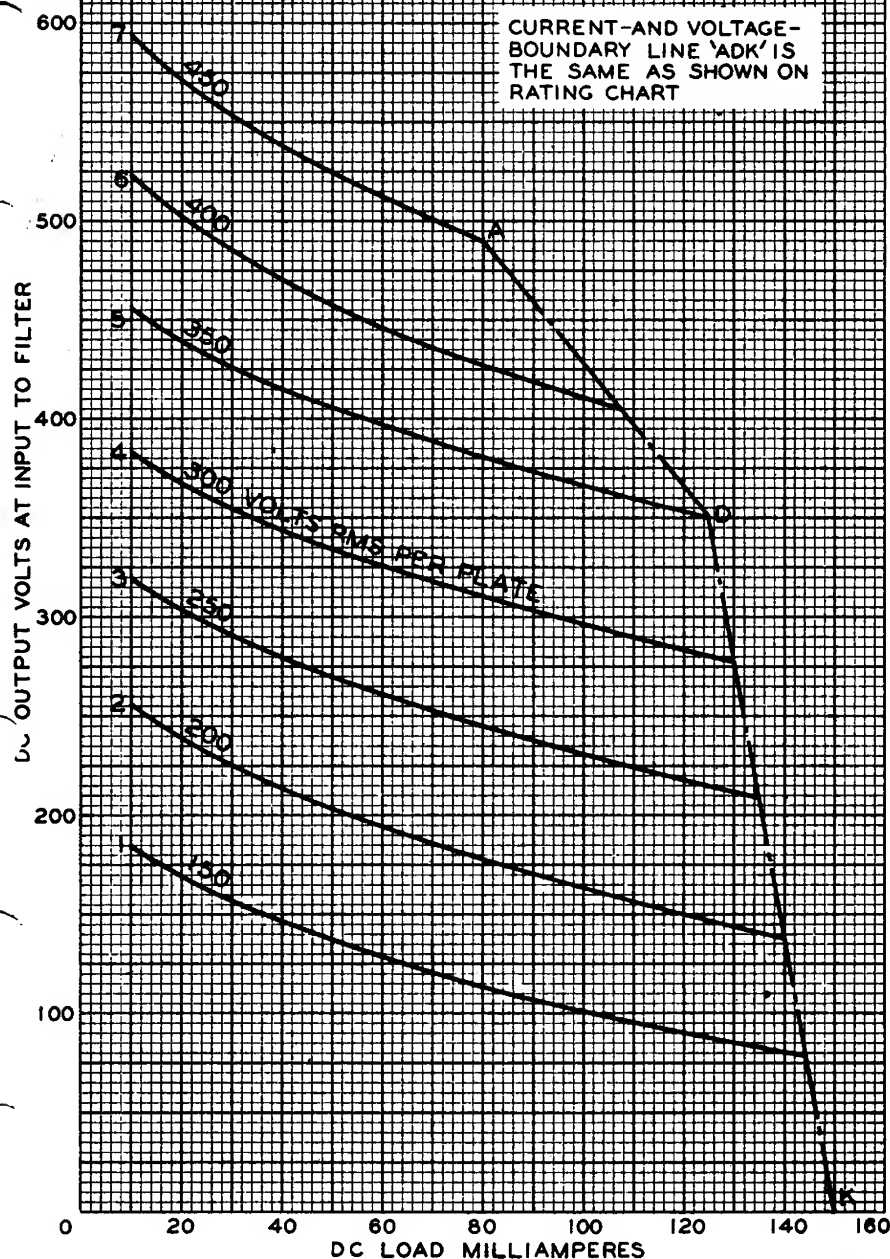
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OPERATION CHARACTERISTICS FULL-WAVE CIRCUIT, CAPACITOR INPUT TO FILTER

$E_f = 6.3$ VOLTS
CAPACITOR (C) INPUT TO FILTER: $C = 10 \mu F$;
TOTAL EFFECTIVE PLATE-SUPPLY IMPEDANCE
PER PLATE $\begin{cases} 50 \text{ OHMS FOR CURVES 1-5} \\ 105 \text{ OHMS FOR CURVES 6 \& 7} \end{cases}$
SUPPLY FREQUENCY = 60 CPS

CURRENT-AND VOLTAGE-
BOUNDARY LINE 'ADK' IS
THE SAME AS SHOWN ON
RATING CHART



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